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ABSTRACT

In order to study the effects of cognitive style, task structure, and task setting on student achievement and attitudes, structured and unstructured tasks were presented to students in both group and individual settings. It was postulated that through small group and individual activities an individual may display his/her best cognitive style of learning and that groups composed of individuals of differing cognitive styles may prefer to work on different types of tasks--individuals who are "field independent" can impose their own structure or strategy upon a task while individuals who are "field dependent" require more explicit directions concerning the dimensions and outcomes of the task from the teacher. It was hypothesized that student achievement will increase if a group composed of field dependent students is given explicit direction or if a field independent student is added to the group to help structure the task. Data indicate that: (1) field independent students did not differ in group versus individual achievement; (2) groups composed of both cognitive styles achieved more than those same persons acting alone; and (3) group and structured conditions were preferred by all subjects. These results suggest that the use of small groups increases student satisfaction and, for some students and certain groups, increases student achievement. (MM)

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The Effects of Cognitive Style, Task Structure, and Task Setting on Student Outcomes - Cognitives and Affective

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(A paper presented at the annual meeting of the American Educational Research Association, New York, April, 1977.)

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Statement of the Problem

The current Zeitgeist in American public education places much emphasis on individualization of instruction. Although it may not be feasible, nor desirable, economically or educationally to use a one-to-one instructional mode, there is a strong movement to tailor instruction to fit particular students or small groups of students (Coop and Sigel, 1971). This move is evidenced by such innovations as learning activity packages, nongraded programs, personalized systems of instruction, contracting, use of modules, small group instruction, and open or flexible schedules. These are only a few of the existing and developing programs. While all of these innovations have merit, few have directly examined the problem of full accommodation for individual differences among students.

For instruction to be optimally effective it must meet the needs of individual students. Meeting these needs can be facilitated if entering behavior of students is assessed (Render, 1973; Carroll, 1963; Gagne, 1965). Entering behavior includes those student characteristics which have an influence on learning. Common lists of student characteristics include: previous learnings, intellectual ability and development, motivational state, and certain social and cultural determinants of potential learning ability. The various cognitive style variables could

also be added to the above list (Gardner, 1953; Glaser, 1962; Kagen, Moss, and Sigel, 1963; Wallach and Kogan, 1965; Wallach, Kogan and Burt, 1967; Witkin, Dyk, Faterson, Goodenough, and Karp, 1962).

One cognitive style variable which has been of great interest is that of field dependence-field independence as formulated by Witkin and his colleagues (Witkin, Dyk, Faterson, Goodenough, and Karp, 1962; Witkin, Lewis, Hertzman, Machover, Meissner, and Wapner, 1954). More research has been conducted on field dependence-independence than any other cognitive style variable. A recent review listed nearly 1600 reports concerned with this variable (Witkin, 1973b).

Field dependence-independence is defined as follows:

> The extent to which a person is able to deal with a part of a field separately from the field as a whole, or the extent to which he is able to disembed items from organized context or, to put it in everyday language, how analytical he is. Because at one extreme of the performance range perception is strongly dominated by the prevailing field, we speak of that mode of perception as "field dependent". For the other extreme, where the person is able to deal with an item independently of the surrounding field, we use the designation "field independent". (Witkin, 1973b, p. 5)

Witkin (1973a) notes that he does not intend to imply that there are two distinct "types", field dependent or field independent, but rather that the dimension is a continuous one and hence an individual should be described as being relatively more field dependent or more field independent.

In addition to considering individual differences from the perspective of assessment and diagnosing student characteristics many educators have planned new modes of instruction as a way of tailoring activities

to fit particular students. One of those modes is small group instruction (McKeachie, 1963). The combination of mode of instruction with assessment of student characteristics might be a more powerful response to individual differences than either alone. In order to examine the effect of such a response as assessing student characteristics and modifying the instructional mode this study included two instructional settings. These were individual and small group (four students working together on the same task).

Recent research on the cognitive style variable of field dependence-field independence indicates that it may be related to the performance of small groups in instructional settings. It has been found that individuals differing in relative disposition to be either field dependent or field independent may respond in markedly differing ways when placed in the social setting of a small group (Deever, 1967; Nevill, 1971; Messick and Damarin, 1964; Eagle, Fitzgibbons, and Goldberger, 1966). These differences vary from the amount of time spent looking at the faces of others, the words remembered (social versus non-social) after a conversation, to the amount and type of incidental learning which occurs during an exchange.

If individuals who differ in cognitive style display different behaviors in various social settings, these differences might also be present in small task or work groups operating in the classroom. These differences in behaviors displayed in a small group could effect the interaction of that group and in turn the outcomes or products of such small task groups. With this in mind one could manipulate the constituency of these small groups relative to cognitive styles. The composition of a group could theoretically effect the interaction which occurs in the group

and its products. If the composition of groups according to cognitive style is shown to have important effects on group interaction and outcomes, then teachers might be able to arrange their small task groups so that more productive interaction and outcomes occur.

Evidence for these implications of grouping within classes comes from research on the composition of groups of individuals differing in cognitive style (DiStefano, 1969; Coop and Sigel, 1971; Witkin, et al., 1968; Wallach, Kogan, and Burt, 1968). This research has examined matched and mismatched conditions. Matched conditions are situations in which all interacting individuals are of a similar cognitive style. (i.e., all field dependent) while mismatched conditions would consist of situations in which individuals with different cognitive styles (i.e., a mix of field dependent and field independent individuals) would be grouped.

Some research indicates that groups composed of individuals differing in cognitive styles may prefer to work on different types of tasks (Witkin, 1973; Witkin and Moore, 1974). It has been found that individuals who are field independent can impose their own structure or strategy upon a task (Davis, 1973; Lezotte, 1969; Grieve and Davis, 1971) while individuals who are field dependent cannot or take longer to do so (Davis, 1973; Lezotte, 1969). It is evident that teachers can supply students with highly structured or unstructured tasks. Some students (i.e., field independent persons) may be able to take a loosely structured assignment, impose their own structure on it, and efficiently set out to complete it. Other students (i.e., field dependent persons) may require more explicit directions concerning task dimensions and outcomes to have similar successes. If composition in terms of task structure is related to cognitive style

then teachers might make sure that a student who possesses the skill of being able to structure loosely defined tasks is placed in each group or alternatively that the task dimensions and expectations are clearly specified or not specified according to group composition.

The research on cognitive style suggests there is great variation in the way in which students process information and hence in the processes and products resulting from the interface of learner and instruction. This has lead to the concept of individual learning styles (Kagan, et al., 1964; Rennels, 1970; Witkin, 1973a). Style of learning may be defined as an information processing habit that determines how an individual generally functions. Differences among individuals in perceiving, cognizing, and conceptualizing are probably as real as are differences in ability levels. Through small group and individual activities an individual may display his/her own best cognitive style of learning. It is in the best interests of both students and teachers if a greater match between student's learning style and teacher's instructional style can be achieved. The present study is an attempt to examine selected portions of this interaction.

Hypotheses

This study was designed to test the following specfic hypotheses:

Hypothesis 1a. Individuals in groups perform better than individuals alone, regardless of cognitive style or task structure.

Hypothesis 1b. Individuals in matched groups perform better than individuals in mismatched groups, regardless of task structure.

Hypothesis 2a. Field dependent individuals have higher satisfaction scores than field independent individuals when the task setting is group,

regardless of task structure.

Hypothesis 2b. Matched group individuals have higher satisfaction scores than mismatched individuals, regardless of task structure.

Hypothesis 3a. Field dependent individuals have higher group maintenance function role ratings than field independent individuals, regardless of task structure.

Hypothesis 3b. Field independent individuals have higher group task function role ratings than field dependent individuals, regardless of task structure.

Hypothesis 4. Field independent individuals have higher member influence ratings than field dependent individuals, in mismatched group, regardless of task structure.

Method

In order to test these hypotheses, structured (multiple-choice) and unstructured (essay) tasks were developed based on the film "I Walk Away in the Rain." This is from the Critical Moments in Teaching film series. Students in five education courses at Purdue University, West Lafayette, Indiana were shown the film and then assigned to one of three experimental blocks: matched field dependents, matched field independents, and mixed (two field dependents and two field independents). The assignments were made on the basis of Hidden Figures Test scores which has been obtained prior to the film viewing. Once assigned to an experimental block, subjects were further assigned to a task group. Task groups in the first two experimental blocks consisted of either four field dependent or four field independent individuals. Groups in the mixed condition consisted of two field dependent persons and two field independent persons. All subjects then completed a series of tasks based on the film. These tasks and their settings were: group structured, group unstructured, individual structured and individual unstructured. These task conditions were arranged so that they were balanced for order of both task type and task setting (structured versus unstructured and individual versus group) across classes. After each task condition subjects evaluated the expereince on an instrument similar to a course and instructor rating scale. In addition, subjects completing the group setting would also rate each member's functioning in the group as well as the perceived member influence of each participant.

Results

Hypothesis 1a: To test this hypothesis the scores from the structured

and unstructured tasks were used as the dependent variable. These scores were summed and used in a 3 x 2 x 2 (cognitive style x task structure x task setting) factorial design with repeated measures on the last two factors. There were 10 cases per cell. The means of individual and group performance for structured and unstructured tasks are presented in Table 1. A main effect was predicted with group structured and unstructured performance being more effective than individual structured and unstructured performance.

The results of the analysis of variance for between and within factors designed to test hypothesis one are presented in Table 2. The hypothesis of a main effect for setting (group versus individual) was supported, $F(2,27) = 16.22$, $p < .001$. Individuals in groups performed better than individuals alone regardless of task structure. Since there was a significant main effect for task setting the mean pairs for each level of cognitive style were examined by using the Newman-Keuls procedure as outlined by Winer (1971, p. 442). A significant difference ($p < .05$) was found between means for the mixed group and the difference between the means for the field dependent approached significance ($p < .10$). The difference between the means of the group and individual settings for field independent was not significant.

Hypothesis 1b: To test this hypothesis the scores from the structured and unstructured tasks were used as the dependent variable. Table 2 presented the overall analysis of this data. The main effect of cognitive style predicted by hypothesis one(a) was not supported. Inspection of Table 3 indicated the means are in the predicted order for the structured task but in the opposite order for the unstructured tasks. This

interaction between cognitive style and task structure was examined by testing for simple main effects of cognitive style on structured and unstructured tasks. Tests on these simple main effects of cognitive style were significant ($p < .05$) at two levels. These were the field dependent and mixed conditions. Field dependents were better at structured tasks and mixed subjects were superior at unstructured tasks. Although field independents did poorer on unstructured tasks than they did on structured tasks this difference was not found to be significant.

Since the three-way (cognitive style x task structure x task setting) interaction was nearing significance ($p < .11$), tests of simple interaction effects were conducted to test if components of the three-way interaction were significant. These tests were performed according to Winer (1971, p. 545). None of these tests was significant.

Hypothesis 2a: The scores on the individual appraisal forms were the dependent variable for tests on this hypothesis. A 3 x 2 x 2 (cognitive style x task structure x task setting) analysis of variance was conducted as described earlier. These were 40 cases per cell.

Table 4 presents the full analysis of variance for these data. The predicted cognitive style main effect was not found. Hence, hypothesis two-a is not supported. Inspection of Table 5, which presents the cell means for the full analysis, shows that the means are in the predicted direction, but these differences are not significant.

Inspection of Table 4 indicated that the main effect of task setting and the main effect of task structure are significant ($p < .001$). Differences between means for each level of cognitive style were tested by the Newman-Keuls procedure as cited earlier. Differences were found to be significant ($p < .05$) at each cognitive style level. All subjects

preferred the group setting to the individual setting.

The structured and unstructured task, individual satisfaction (appraisal) scores were further analyzed by testing the mean pairs at each level of cognitive style as described earlier. Differences between means were significant ($p < .05$) at all levels of cognitive style except field independents.

Hypothesis 2b: The dependent variable for the tests on this hypothesis were the scores on the individual appraisal forms. As in hypothesis two-a, the predicted main effects of cognitive style were not obtained. Hence, hypothesis two(b) is not supported. The cell means presented earlier in Table 5 indicate results in the predicted direction (field dependent and field independent greater than mixed) but these differences were not significant.

As attempt to validate the dependent measure used to test the two previous hypotheses was conducted at the close of the data collection. Subjects were asked to state which of the combinations of task setting and task structure (individual structured, group structured, individual unstructured, or group unstructured) they preferred. The stated preference was then correlated with the subject's measured preference for task setting and task structure. This "measured preference" was taken to be the condition which yielded the largest individual appraisal score for each subjects. A correlation coeffiecient of .44 was found between stated condition preference and measured condition preference ($N = 109$). This coefficient is significant beyond the .001 level. Hence, the individual appraisal score can be taken as a somewhat valid predictor of condition preference.

Hypothesis 3a: In order to test this hypothesis the scores obtained from the T-M Role Sheet - maintenance function subscale were used as the dependent variable. Table 6 presents the cell means for maintenance function ratings for cognitive style and task structure (task setting is group). A 3 x 2 (cognitive style x task structure) factorial analysis of variance (n = 40) was conducted on these data to test hypothesis three(a). The results of this analysis are presented in Table 7.

This analysis yielded a significant main effect for both cognitive style, $F(2,117) = 6.07$, $p < .01$, and task structure, $F(1,117) = 9.04$, p .01. The planned comparison between field dependents and field independents was conducted as described by Winer (1971, p. 384). This test yielded a significant ($p < .05$) difference between field dependents and field independents. Field dependents receive higher maintenance function ratings than do field independents, regardless of task structure. Tests on all possible pairs of means was conducted by using the Newman-Keuls procedure as cited earlier. Again, this test yielded significant differences ($p < .05$) for field dependents only.

Hypothesis 3b: The tests for this hypothesis used the scores from the T-M Role Sheet--Task subscale, as the dependent variable. The scores from this instrument were summed and used in a 3 x 2 (cognitive style x task structure) factorial design with repeated measures (n = 40). The cell means of this design are presented in Table 8. These means are not in the predicted direction. The results of the analysis of variance procedure are presented in Table 9. None of the F ratios was significant. Hypothesis three(b) is not supported by these data.

Hypothesis 4: The test of this hypothesis utilized the scores from the Member Influence forms as the dependent variable. Table 10 presents

the means for these data. The cell means differed in the predicted direction. To test for significance in these differences a 2 x 2 (cognitive style x task structure) factorial repeated measures analysis of variance was conducted. Table 11 presents the results of this analysis. No effects were found to be significant. Hence, hypothesis four is not supported by these data.

Interpretations and Conclusions

The evidence of the present study tends to support the conclusion of the group superiority hypothesis (Walker, 1974). There is some effect which is induced when individuals work together which leads to higher performance and satisfaction. This is by no means a new finding, but it does extend previous research into realistic classroom settings.

The above result does not entirely fit with earlier research concerning cognitive styles (Witkin, 1973; Witkin and Moore, 1974). The result is in the expected direction for field dependent persons (although not significantly so) and also, is in the expected direction from what would be predicted for field independent persons. Field independents did not achieve significant improvements in the group setting compared to the individual setting. Previous research leads one to conclude that the social orientation of field dependents would lead these individuals to prefer, and hence perform better, in a group setting. The present results lend some support to this conclusion. The previous research would also lead one to conclude that field independents, being disposed to have an impersonal orientation, would not do as well in group tasks. The present study also lends support to this conclusion. Field independents did not do better under the group setting while field dependents did do better, although this improvement only approached

significance.

The subjects which achieved highest performance under the group setting were the mixed groups. This leads to a conflict between present results and previous research. Previous research on match-mismatch (DiStefano, 1969; Shows, 1967; Wallach, Kogan, and Burt, 1967) of cognitive styles generally supports the hypothesis of superiority of matched conditions. Present results tend to contradict these earlier findings. Here, mismatched groups were superior to matched groups. A possible explanation of these results may be generated from the work of Thelen (1969). He stated a principle referred to as the "Principle of Least Group Size." By this, Thelen meant the smallest size a group could have and still contain all relevant skills. These relevant skills would include the ability to carry out the various task and maintenance functions needed for effective group processing. In the present study, the mixed groups may have been the groups which were most likely to contain these "relevant skills" and as Witkin (1973, p. 17) theorized, "may allow for more lively (and profitable) interaction." These competing hypotheses to explain and predict matched and mismatched group performance need to be examined further.

In addition to the conflicts between this and past research relative to the effects of the so-called social or impersonal orientation of field dependents and field independents upon small group performance were the results of the variable of task structure. Previous research would have one conclude that field dependent persons would not be able to generate (or at least would have difficulty generating) the necessary structure to solve unstructured tasks. The results of the present study did not add support for this conclusion. The results were

in the predicted direction but were not significant. Field independents did not perform significantly better than field dependents on unstructured tasks. This suggests these earlier studies should perhaps be re-examined in light of the present results. Perhaps the type of task as well as the individual's general task solving abiltiy may be more powerful determiners of performance than is cognitive style alone. It may also be that in the present study the subjects had become proficient in structuring unstructured tasks through practice and hence, the effects of cognitive style were masked.

In summary, what had been predicted was that individuals differing in cognitive style differed in modes of information processing. These differences in information processing were further theorized to have an effect on performance within a small group. This then lead to what was conceptualized as a cognitive style theory of small group behavior. But, this did not receive the expected support from the present study. Rather, the variables of task structure, task setting, and the mix of cognitive styles within a group were more powerful in determining performance and preferences. In addition, the presence or absence of various problem-solving skills may have been the factors producing the results obtained in the mismatched versus matched comparisons. The skills of the group, not the cognitive styles, may have been the determining factors in group performance.

Implications

There are several implications for classroom use which can be drawn from the present study. The first of these is the further support for incorporating the use of small groups as part of classroom activities. Many teachers have done this in the past and the present study

adds support for this decision. Students in this study preferred the group setting and also, most (mixed groups and field dependent groups) performed better in the group setting.

A second implication of the present study deals with the dimension of task structure. As has been the case in past research (McKeachie, 1963) students prefer structured situations. Teachers should be aware of this in designing instructional activities. It is suggested that during the intial stages of introducing the use of small groups, task structure remain high. This should act to maintain student satisfaction and aid performance. As the students become accustomed to the small group settings, less and less structure could be provided, until students had learned to generate their own. As previously stated, how soon and how completely the supporting structure can be removed should be the topic of future research.

A final implication to be considered has greatest relevance for professional education courses. It is a common practice to group students for small task groups according to major or teaching field in teacher education courses. This study strongly suggests this decision should be re-examined in light of the superior performance of the mixed groups. Since there is a substantial body of literature which support the contention that persons of similar cognitive styles (i.e., field dependents or field independents) tend to make similar vocational area choices, one may well be grouping according to cognitive style as well as major when major is used as the criterion for grouping. When four math/science majors are grouped together to do a small group exercise, one may well have four field independent individuals. Also, the grouping of four elementary or four social studies majors may well

result in groups of all field dependent individuals. The results from the present study suggests more powerful effects of group work may result from groups which are mixed in cognitive style. Since cognitive style and major tend to co-vary, one should seek groups composed of differing majors or subject area fields.

Of course, this is only practical when the task at hand is not curriculum or content based. Such topics as goals of education, entering student characteristics, or classroom management could be adaptable while tasks related to designing instructional activities may not be. In this latter case the student's perception of the relevance of the task to his own goals may be more important than any benefits obtained from being in a group mixed for cognitive style. A student might be more concerned with his/her own specific situation and hence, the mixed group setting could hinder task solution.

TABLE 1

Means of Individuals and Groups for Structured and Unstructured Tasks at Each Level of Cognitive Style

Cognitive Style	Structured		Unstructured	
	Individual	Group	Individual	Group
Field Dependent	48.00	57.60	47.50	48.40
Field Independent	51.40	53.00	48.50	51.50
Mixed	47.50	52.40	51.10	61.50

TABLE 2

Summary of Analysis of Variance for Repeated Measures Factorial Design for Group and Individual Performance on Structured and Unstructured Tasks at Each Level of Cognitive Style

Source of Variation	Sum of Squares	df	Mean Squares	F
Between Groups	1746.38	29	60.22	
Cognitive Style	162.52	2	81.26	1.39
Subj. W. Groups	1583.85	27	58.66	
Within Groups	7149.51	90	79.44	
Task Structure	1.63	1	1.63	.02
Cognitive Style x Task Structure	685.22	2	342.61	3.65*
Task Structure x Subj. W. Groups	2536.65	27	93.95	
Task Setting	770.13	1	770.13	16.22***
Cognitive Style x Task Setting	143.62	2	71.81	1.51
Task Setting x Subj. W. Groups	2181.74	27	47.47	
Task Structure x Task Setting	2.70	1	2.70	.05
Cognitive Style x Task Str. x Task Setting	267.05	2	133.53	2.46
Task Str. x Setting x Subj. W. Groups	1460.75	27	54.10	
Total	8895.85	119		

*$p < .05$
***$p < .001$

TABLE 3

Means for Structured and Unstructured Tasks
for Different Levels of Cognitive Style
for Group Setting Only

Cognitive Style	Structured Group	Unstructured Group
All Field Dependent	57.60	48.40
All Field Independent	53.00	51.50
Mixed	52.40	61.50

TABLE 4

Summary of Analysis of Variance for Repeated Measures Factorial Design for Individual Appraisal Scores for All Levels of Cognitive Style, Task Structure, and Task Setting

Source of Variation	Sum of Squares	df	Mean Squares	F
Between Groups	10093.94	119	84.82	
Cognitive Style	335.62	2	167.81	2.01
Subj. W. Groups	9758.27	117	83.40	
Within Groups	19745.64	360	54.85	
Task Structure	813.80	1	813.80	18.10***
Cognitive Style x Task Structure	136.27	2	68.13	.22
Task Structure x Subj. W. Groups	5261.19	117	44.97	
Task Setting	1900.05	1	1900.05	26.45***
Cognitive Style x Task Setting	89.02	2	44.51	.62
Task Setting x Subj. W. Groups	8404.23	117	71.83	
Task Structure x Task Setting	8.80	1	8.80	.33
Cognitive Style x Task Str. x Task Setting	37.52	2	18.76	.71
Task Str. x Setting x Subj. W. Groups	3094.88	117	26.45	
Total	29839.78	479		

***p <.001

TABLE 5

Means of Individual Appraisal Scores for Individuals and Groups for Structured and Unstructured Tasks at Each Level of Cognitive Style

Cognitive Style	Structured		Unstructured	
	Individual	Group	Individual	Group
Field Dependent	46.85	49.85	43.67	46.95
Field Independent	43.42	47.57	41.27	47.45
Mixed	45.05	49.02	41.75	45.05

TABLE 6

Means of Member Maintenance Function Ratings for Structured and Unstructured Tasks and Cognitive Style

Cognitive Style	Structured	Unstructured
Field Dependent	24.17	22.91
Field Independent	21.82	21.16
Mixed	22.76	22.15

TABLE 7

Summary of Factorial Analysis of Variance of Member Maintenance Function Ratings for Structured and Unstructured Tasks and Cognitive Style

Source of Variation	Sum of Squares	df	Mean Squares	F
Between Groups	1791.31	119	15.05	
Cognitive Style	168.50	2	84.25	6.07**
Subj. W. Groups	1622.79	117	13.87	
Within Groups	596.40	120	4.97	
Task Structure	42.42	1	42.42	9.04**
Cognitive Style x Task Structure	5.24	2	2.62	.56
Task Structure x Subj. W. Groups	548.85	117	4.69	
Total	2387.84	239		

**$p < .01$

TABLE 8

Cell Means for Mixed Group Field Dependent and Field Independent Maintenance Function Ratings for Structured and Unstructured Tasks

Cognitive Style	Structured Task	Unstructured Task
Field Dependent	21.97	21.97
Field Independent	23.55	22.36

TABLE 9

Summary of Analysis of Variance of Maintenance Function Ratings for Mixed Group Field Dependent and Mixed Group Field Independent Subjects and Task Structure

Source of Variation	Sum of Squares	df	Mean Squares	F
Between Groups	605.05	39	15.51	
Cognitive Style	19.01	1	19.01	1.23
Subj. W. Groups	586.00	38	15.42	
Within Groups	192.24	40	4.81	
Task Structure	7.32	1	7.32	1.57
Cognitive Style x Task Structure	7.44	1	7.44	1.59
Task Structure x Subj. W. Groups	177.50	38	4.67	
Total	797.27	79		

TABLE 10

Cell Means for Memoer Influence Scores for
Mixed Group Subjects and Task Structure

Cognitive Style	Structured Task	Unstructured Task
Field Dependent	23.66	24.54
Field Independent	25.90	25.48

TABLE 11

Summary of Analysis of Variance for
Mixed Group Member Influence
Scores and Task Structure

Source of Variation	Sum of Squares	df	Mean Squares	F
Between Groups	1340.16	39	34.36	
Cognitive Style	50.40	1	50.40	1.48
Subj. W. Groups	1289.76	38	33.94	
Within Groups	453.08	40	11.33	
Task Structure	1.01	1	1.01	.08
Cognitive Style x Task Structure	8.45	1	8.45	.72
Task Structure x Subj. W. Groups	443.61	38	11.67	
Total	1793.22	79		

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